

SEQUENCE LISTING

(1) GENERAL INFORMATION

- (i) APPLICANT: Hillman, Jennifer L.  
Shah, Purvi
- (ii) TITLE OF THE INVENTION: NOVEL MITOCHONDRIAL ADENYLATE KINASE
- (iii) NUMBER OF SEQUENCES: 5
- (iv) CORRESPONDENCE ADDRESS:
  - (A) ADDRESSEE: Incyte Pharmaceuticals, Inc.
  - (B) STREET: 3174 Porter Drive
  - (C) CITY: Palo Alto
  - (D) STATE: CA
  - (E) COUNTRY: USA
  - (F) ZIP: 94304
- (v) COMPUTER READABLE FORM:
  - (A) MEDIUM TYPE: Diskette
  - (B) COMPUTER: IBM Compatible
  - (C) OPERATING SYSTEM: DOS
  - (D) SOFTWARE: FastSEQ for Windows Version 2.0
- (vi) CURRENT APPLICATION DATA:
  - (A) APPLICATION NUMBER: To Be Assigned
  - (B) FILING DATE: Herewith
  - (C) CLASSIFICATION:
- (vii) PRIOR APPLICATION DATA:
  - (A) APPLICATION NUMBER:
  - (B) FILING DATE:
- (viii) ATTORNEY/AGENT INFORMATION:
  - (A) NAME: Billings, Lucy J.
  - (B) REGISTRATION NUMBER: 36,749
  - (C) REFERENCE/DOCKET NUMBER: PF-0256 US
- (ix) TELECOMMUNICATION INFORMATION:
  - (A) TELEPHONE: 415-855-0555
  - (B) TELEFAX: 415-845-4166
  - (C) TELEX:

(2) INFORMATION FOR SEQ ID NO:1:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 227 amino acids
  - (B) TYPE: amino acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY: Consensus  
(B) CLONE: 2122022

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

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Met Gly Ala Ser Ala Arg Leu Leu Arg Ala Val Ile Met Gly Ala Pro
 1           5           10           15
Gly Ser Gly Lys Gly Thr Val Ser Ser Arg Ile Thr Thr His Phe Glu
 20           25           30
Leu Lys His Leu Ser Ser Gly Asp Leu Leu Arg Asp Asn Met Leu Arg
 35           40           45
Gly Thr Glu Ile Gly Val Leu Ala Lys Ala Phe Ile Asp Gln Gly Lys
 50           55           60
Leu Ile Pro Asp Asp Val Met Thr Arg Leu Ala Leu His Glu Leu Lys
 65           70           75           80
Asn Leu Thr Gln Tyr Ser Trp Leu Leu Asp Gly Phe Pro Arg Thr Leu
 85           90           95
Pro Gln Ala Glu Ala Leu Asp Arg Ala Tyr Gln Ile Asp Thr Val Ile
100           105           110
Asn Leu Asn Val Pro Phe Glu Val Ile Lys Gln Arg Leu Thr Ala Arg
115           120           125
Trp Ile His Pro Ala Ser Gly Arg Val Tyr Asn Ile Glu Phe Asn Pro
130           135           140
Pro Lys Thr Val Gly Ile Asp Asp Leu Thr Gly Glu Pro Leu Ile Gln
145           150           155           160
Arg Glu Asp Asp Lys Pro Glu Thr Val Ile Lys Arg Leu Lys Ala Tyr
165           170           175
Glu Asp Gln Thr Lys Xaa Val Leu Xaa Tyr Tyr Gln Lys Lys Gly Val
180           185           190
Leu Glu Thr Phe Ser Gly Thr Glu Thr Asn Lys Ile Trp Pro Tyr Val
195           200           205
Tyr Ala Phe Leu Gln Thr Lys Val Pro Gln Arg Ser Gln Lys Ala Ser
210           215           220
Val Thr Pro
225

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(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 854 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY: Consensus  
(B) CLONE: 2122022

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

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GCCANGCCCA AAGCCCTGGT ACCCGCGCGG TGGGGCCTCA GTCTGCGGCC ATGGGGGCGT      60
CCGCGCGGCT GCTGCGAGCG GTGATCATGG GGGCCCCGGG CTCGGGCAAG GGCACCGTGT      120
CGTCGCGCAT CACTACACAC TTCGAGCTGA AGCACCTCTC CAGCGGGGAC CTGCTCCGGG      180

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ACAACATGCT	GCGGGGCACA	GAAATTGGCG	TGTTAGCCAA	GGCTTTCATT	GACCAAGGGA	240
AACTCATCCC	AGATGATGTC	ATGACTCGGC	TGGCCCTTCA	TGAGCTGAAA	AATCTCACCC	300
AGTATAGCTG	GCTGTTGGAT	GGTTTTCCAA	GGACACTTCC	ACAGGCAGAA	GCCCTAGATA	360
GAGCTTATCA	GATCGACACA	GTGATTAACC	TGAATGTGCC	CTTTGAGGTC	ATTAAACAAC	420
GCCTTACTGC	TCGCTGGATT	CATCCCGCCA	GTGGCCGAGT	CTATAACATT	GAATTCAACC	480
CTCCCAAAAC	TGTGGGCATT	GATGACCTGA	CTGGGGAGCC	TCTCATTCAG	CGTGAGGATG	540
ATAAACCAGA	GACGGTTATC	AAGAGACTAA	AGGCTTATGA	AGACCAAACA	AAGNCAGTCC	600
TGGNATATTA	CCAGAAAAAA	GGGGTGCTGG	AAACATTCTC	CGGAACAGAA	ACCAACAAGA	660
TTTGGCCCTA	TGTATATGCT	TTCTACAAA	CTAAAGTTCC	ACAAAGAAGC	CAGAAAGCTT	720
CAGTTACTCC	ATGAGGAGAA	ATGTGTGTAA	CTATTAATAG	TAAGATGGGC	AAACCTCCTA	780
GTCCTTGCA	TTAGAAGCTG	CTTTTCCTAA	GACTTCTAGT	ATGTATGAAT	TCTTTGAAAA	840
TTATATTACT	TTTA					854

## (2) INFORMATION FOR SEQ ID NO:3:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 227 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

## (vii) IMMEDIATE SOURCE:

- (A) LIBRARY: GenBank
- (B) CLONE: 217576

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

Met	Gly	Ala	Ser	Ala	Arg	Leu	Leu	Arg	Ala	Ala	Ile	Met	Gly	Ala	Pro
1				5					10					15	
Gly	Ser	Gly	Lys	Gly	Thr	Val	Ser	Ser	Arg	Ile	Thr	Lys	His	Phe	Glu
			20					25					30		
Leu	Lys	His	Leu	Ser	Ser	Gly	Asp	Leu	Leu	Arg	Asp	Asn	Met	Leu	Arg
			35				40					45			
Gly	Thr	Glu	Ile	Gly	Val	Leu	Ala	Lys	Thr	Phe	Ile	Asp	Gln	Gly	Lys
			50				55					60			
Leu	Ile	Pro	Asp	Asp	Val	Met	Thr	Arg	Leu	Val	Leu	His	Glu	Leu	Lys
65					70				75					80	
Asn	Leu	Thr	Gln	Tyr	Asn	Trp	Leu	Leu	Asp	Gly	Phe	Pro	Arg	Thr	Leu
			85					90					95		
Pro	Gln	Ala	Glu	Ala	Leu	Asp	Arg	Ala	Tyr	Gln	Ile	Asp	Thr	Val	Ile
			100					105					110		
Asn	Leu	Asn	Val	Pro	Phe	Glu	Val	Ile	Lys	Gln	Arg	Leu	Thr	Ala	Arg
			115				120						125		
Trp	Ile	His	Pro	Gly	Ser	Gly	Arg	Val	Tyr	Asn	Ile	Glu	Phe	Asn	Pro
			130				135					140			
Pro	Lys	Thr	Met	Gly	Ile	Asp	Asp	Leu	Thr	Gly	Glu	Pro	Leu	Val	Gln
145				150						155				160	
Arg	Glu	Asp	Asp	Arg	Pro	Glu	Thr	Val	Val	Lys	Arg	Leu	Lys	Ala	Tyr
			165					170					175		
Glu	Ala	Gln	Thr	Glu	Pro	Val	Leu	Glu	Tyr	Tyr	Arg	Lys	Lys	Gly	Val
			180					185					190		
Leu	Glu	Thr	Phe	Ser	Gly	Thr	Glu	Thr	Asn	Lys	Ile	Trp	Pro	His	Val
			195				200					205			
Tyr	Ala	Phe	Leu	Gln	Thr	Lys	Leu	Pro	Gln	Arg	Ser	Gln	Glu	Thr	Ser

210 215 220  
Val Thr Pro  
225

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 227 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(vii) IMMEDIATE SOURCE:

- (A) LIBRARY: GenBank
- (B) CLONE: 450312

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

Met Gly Ala Ser Gly Arg Leu Leu Arg Ala Val Ile Met Gly Ala Pro  
1 5 10 15  
Gly Ser Gly Lys Gly Thr Gly Ser Ser Arg Ile Thr Lys His Phe Glu  
20 25 30  
Leu Lys His Leu Ser Ser Gly Asp Leu Leu Arg Gln Asn Met Leu Gln  
35 40 45  
Gly Thr Glu Ile Ala Val Leu Ala Lys Ser Phe Ile Asp Gln Gly Lys  
50 55 60  
Leu Ile Pro Asp Asp Asp Met Thr Arg Leu Ala Leu His Glu Leu Lys  
65 70 75 80  
Asn Leu Thr Gln Cys Ser Trp Leu Leu Asp Gly Phe Pro Arg Thr Leu  
85 90 95  
Pro Gln Ala Glu Ala Leu Asp Arg Val Tyr Gln Ile Asp Thr Val Ile  
100 105 110  
Asn Leu Asn Val Pro Phe Glu Val Ile Lys Leu Arg Leu Thr Ala Arg  
115 120 125  
Trp Ile His Pro Ala Ser Gly Arg Val Tyr Asn Ile Glu Phe Asn Pro  
130 135 140  
Pro Lys Thr Val Gly Ile Asp Asp Leu Thr Gly Glu Pro Leu Ile Gln  
145 150 155 160  
Arg Glu Asp Asp Lys Pro Glu Thr Val Ile Lys Arg Leu Lys Ala Tyr  
165 170 175  
Glu Ala Gln Thr Glu Pro Val Leu Gln Tyr Tyr Gln Lys Lys Gly Val  
180 185 190  
Leu Glu Thr Phe Ser Gly Thr Glu Thr Asn Lys Ile Arg Pro His Val  
195 200 205  
Tyr Ser Phe Leu Gln Met Lys Val Pro Glu Thr Ile Gln Lys Ala Ser  
210 215 220  
Val Thr Pro  
225

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 223 amino acids
- (B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(vii) IMMEDIATE SOURCE:

(A) LIBRARY: GenBank

(B) CLONE: 28577

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Met	Ala	Ser	Lys	Leu	Leu	Arg	Ala	Val	Ile	Leu	Gly	Pro	Pro	Gly	Ser
1				5					10					15	
Gly	Lys	Gly	Thr	Val	Cys	Gln	Arg	Ile	Ala	Gln	Asn	Phe	Gly	Leu	Gln
			20					25					30		
His	Leu	Ser	Ser	Gly	His	Phe	Leu	Arg	Glu	Asn	Ile	Lys	Ala	Ser	Thr
		35					40					45			
Glu	Val	Gly	Glu	Met	Ala	Lys	Gln	Tyr	Ile	Glu	Lys	Ser	Leu	Leu	Val
	50					55					60				
Pro	Asp	His	Val	Ile	Thr	Arg	Leu	Met	Met	Ser	Glu	Leu	Glu	Asn	Arg
65					70					75					80
Arg	Gly	Gln	His	Trp	Leu	Leu	Asp	Gly	Phe	Pro	Arg	Thr	Leu	Gly	Gln
			85						90					95	
Ala	Glu	Ala	Leu	Asp	Lys	Ile	Cys	Glu	Val	Asp	Leu	Val	Ile	Ser	Leu
			100					105					110		
Asn	Ile	Pro	Phe	Glu	Thr	Leu	Lys	Asp	Arg	Leu	Ser	Arg	Arg	Trp	Ile
	115						120					125			
His	Pro	Pro	Ser	Gly	Arg	Val	Tyr	Asn	Leu	Asp	Phe	Asn	Pro	Pro	His
	130					135					140				
Val	His	Gly	Ile	Asp	Asp	Val	Thr	Gly	Glu	Pro	Leu	Val	Gln	Gln	Glu
145					150					155					160
Asp	Asp	Lys	Pro	Glu	Ala	Val	Ala	Ala	Arg	Leu	Arg	Gln	Tyr	Lys	Asp
			165						170					175	
Val	Ala	Lys	Pro	Val	Ile	Glu	Leu	Tyr	Lys	Ser	Arg	Gly	Val	Leu	His
			180					185					190		
Gln	Phe	Ser	Gly	Thr	Glu	Thr	Asn	Lys	Ile	Trp	Pro	Tyr	Val	Tyr	Thr
		195					200					205			
Leu	Phe	Ser	Asn	Lys	Ile	Thr	Pro	Ile	Gln	Ser	Lys	Glu	Ala	Tyr	
	210					215					220				